

## **SECTION 106 – METAL GUARD FENCE**

### **1. GENERAL**

This work shall consist of the construction of deep beam guard fence in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or established by the Engineer.

### **2. MATERIALS**

The rail element shall be formed from 12-gauge steel plates manufactured from open-hearth, basic oxygen, or electric furnace steel.

The plate shall be shaped into a beam not less than 12-inches wide and not less than 3-inches deep.

The rail element shall be spliced by lapping in the direction of traffic. The splice shall be fastened with 8 bolts and shall be not less than 12-1/2 inches in length.

The terminal sections shall be formed to the dimensions and shape shown on the plans and from plate made from the same type of metal and having the same gauge thickness as the rail elements.

Bolts, nuts, and washers for use in erecting steel plate guard fence shall conform to the requirements of A.S.T.M. Designation: A153

Posts and bracing shall be sawed to dimensions as shown on the plans. They shall be S4S, and shall be graded in accordance with the "Methods for Establishing Structural Grades of Lumber", A.S.T.M. Designation: D245. Any commercial grading rules that will provide material of equal or greater stress value may be used

### **3. CONSTRUCTION REQUIREMENTS**

Holes for guard fence posts shall be excavated to the depth indicated on the grade stakes set by the Engineer. The holes shall be sufficient size to permit adequate compaction of the backfill around the posts.

The posts shall be set plumb, firm, and true to the lines and grades established. The backfill around the posts shall be placed in thin layers and thoroughly compacted. The top of the backfill shall be of the same material that is used in the construction of the shoulders and thickness shall be at least equal to the thickness of the shoulder at that point. The cost of all excavation and backfill material shall be considered as subsidiary to the bid item for which payment is made.

The guard fence rails, terminal sections, and fittings shall be placed and fastened in accordance with the details shown on the plans.

### **4. STORING OF MATERIALS**

To prevent galvanic action, galvanized guard fence shall be stored in a completely dry place and be kept completely dry until installed.

Galvanized surfaces which have been abraded so that the base metal is exposed, threaded portions of all fittings and fasteners and cut ends of bolts shall be protected in a manner as may be specified or directed.